CHAPTER 18 - Hazardous Waste

Table of Contents

CHAPTER 18 - Hazardous Waste....18-3
ARTICLE 1 - Policies....18-3
Hazardous Waste Process Integrated with PYPSCAN....18-3
Avoidance whenever Feasible....18-3
Project Manager's Role....18-3
Cleanup Timetable....18-3
HW Contracts....18-4
Technical Resources....18-4
Right of Way....18-4
ARTICLE 2 - Hazardous Waste Process....18-4
General....18-4
Screen the List for "Minimal Risk" Project Types....18-4
Meetings....18-5
HW Initial Site Assessment....18-5
FIGURE 1 - Hazardous Waste Study: Minimal-Risk Projects....18-5
Discussion in PSR....18-6
HW Status Meeting....18-6
Site Investigation....18-6
Notify Owner and Appropriate Regulatory Agencies....18-6
HW Problems Discussed in Project Report....18-6
Alternative Evaluations....18-7
Project Decision HW Meeting....18-7
HW Strategy Meeting....18-7
Cleanup by Owner and/or Responsible Party....18-7
Additional Site Investigation — if Warranted....18-8
Remedial Investigation / Feasibility Study....18-8
Appraisal for Certificate of Sufficiency....18-8
Hazardous Waste Management Plan....18-9
HWMP Decision Meeting....18-9
Community Involvement Plan....18-9
Remedial Action Plan....18-9
Regulatory Agency Involvement....18-9
HW PS&E....18-10
Recovery Actions....18-10
FIGURE 2 - Caltrans Hazardous Waste Process Overview....18-11
FIGURE 3 - Hazardous Waste Process Milestones....18-13

CHAPTER 18 - Hazardous Waste

ARTICLE 1 - Policies

Hazardous Waste Process Integrated with PYPSCAN

The Hazardous Waste (HW) process has been integrated with the project development process and PYPSCAN milestones. The process milestones are points where key decisions regarding hazardous waste issues are to be addressed. The milestones present a number of meetings where functional area responsibilities are assigned, decisions and tasks are identified, and a course of action is determined. If, at any point within the process a project has been cleared, or the hazardous waste issue has been resolved, the process can be terminated.

Avoidance whenever Feasible

When acquiring properties for transportation (or transportation-related) projects, it is Caltrans policy to (1) fully consider, and if possible, to avoid all potential aspects of hazardous waste; and where involved, (2) to ensure adequate protection for employees, workers, and the community: prior to, during, and after construction. No acquisition is to take place until hazardous waste/material investigation reports have been completed and appraisals reflect the findings.

If a contaminated site is encountered and avoidance is not prudent, Caltrans should make every effort to have the owner and/or responsible party(s) investigate and clean up the contamination prior to acquisition.

In cases where Caltrans must clean up contaminated property, cost reimbursements will be sought from the responsible party(s). Consultants will be used to investigate, characterize, and determine the dimension of hazardous waste problems.

Project Manager's Role

It is the Project Manager's (PM) responsibility to ensure that hazardous waste identification and cleanup is addressed and completed as early as possible in the project development process.

Cleanup Timetable

Regardless of who is responsible for performing the cleanup of a contaminated project site, such cleanup should be completed prior to PS&E submittal for advertising. Only in exceptional cases, (e.g., contamination in future underpass areas that must be excavated during construction) will mitigation of the contaminated materials be allowed concurrently with project construction. Exceptions must be approved by the Chief Engineer, delegated to the Design and Local Programs Program (DLPP) Program Manager, prior to PS&E submittal.

HW Contracts

During the HW process, several types of contracts are available for investigating and cleaning up HW sites. Creating contracts is a time-consuming process; it should therefor be taken into consideration. If at any point during the HW process it is possible to combine tasks into a staged contract, time can be saved.

Technical Resources

The Hazardous Waste Management Office in the Environmental Program is available to assist in resolving hazardous waste problems. Early and continued involvement by this resource, along with the district HW Unit is essential in avoiding unnecessary cost and delays from hazardous waste problems. The Legal Division should be consulted regarding documentation for cost recovery.

Right of Way

Right of Way should be involved early in the project development process so that hazardous waste problems can be identified early, property owner contacts initiated, and all additional necessary actions taken to resolve the problems on a timely basis.

ARTICLE 2 - Hazardous Waste Process

General

Every project that includes excavation, structure demolition or modification, or the purchase of new right of way, will require an Initial Site Investigation (ISA) to determine if known or potential hazardous waste is present within the project limits. Lands and Buildings projects, utility relocations, gifts of property, and hardship and protection acquisition must consider possible hazardous waste/material issues. Those Caltrans functional units (and PDT) identified in Figure 3 are responsible for providing support, as requested, and as defined in the process. The ISA Checklist and instructions are included as Exhibits in Appendix DD.

Screen the List for "Minimal Risk" Project Types

Hazardous Waste considerations are included in the Preliminary Environmental Evaluation. The Environmental Unit, along with the Project Engineer (PE) and the District Hazardous Waste Coordinator, should screen the list of minimal-risk project types to see if an ISA is required. Figure 1 contains the list of "minimal-risk" project types that normally will not encounter hazardous waste problems.

Projects that do not require new right of way, minor excavation, and structure demolition/modification generally do not present much risk of hazardous waste involvement. However, the PE and Environmental Coordinator are cautioned that the minimal-risk list should not be used without consideration of surrounding land use, since even minor excavation could involve hazardous waste that has migrated from some off-site location.

Meetings

Communication plays a vital role in solving hazardous waste problems. Project Development Team (PDT) meetings facilitate such communication.

HW Initial Site Assessment

If a project type is not on the "HW Study: Minimal-Risk Projects" list (Figure 1), an ISA is required. The Environmental Unit continues to be the lead and will guide the preparation of the ISA Checklist. (See Appendix DD for a copy of the ISA Checklist.)

FIGURE 1 - Hazardous Waste Study: Minimal-Risk Projects

CAUTION: Use this list carefully; the discovery of hazardous waste after a project has gone to construction usually results in long and costly delays.

Potentially Exempt Projects

- Pavement reconstruction, resurfacing, and placement of seal coat
- Work on bridge structures and appurtenant facilities, such as traffic or control devices (beware of existing lead base paints)
- Repair and maintenance of the highway and all appurtenant facilities
- Landscaping within highway right of way
- Bridge maintenance painting, when performed in conformance with the requirements of air pollution control and water pollution control agencies having jurisdiction
- Addition or replacement of devices such as glare screen, median barrier, fencing, guardrail, safety barriers, energy attenuators, guide posts, markers, safety cables, ladders, signs
- Installation of noise barriers and alteration to existing buildings to provide for noise attenuation (beware of friable asbestos)
- Projects to eliminate hazards within the operating areas
- Modifying existing features such as curbs, dikes, headwalls, slopes, ditches, etc. within the right of way to improve safety
- Maintenance of existing landscaping, native growth, and water supply reservoirs (excluding the use of economic poisons, as defined in Division 7, Chapter 2, Agriculture Code)
- Maintenance of fish screens, fish ladders, wildlife habitat, etc. to protect fish and wildlife resources
- Minor operational improvements, such as median and side ditch paving, drainage facilities
- Installation or modification of traffic control systems and devices including addition of new elements such as signs, signals, controllers, etc.
- Installation, removal, or modification of regulatory, warning and information signs - including new copy on existing on- and off-premise signs
- Minor alteration or widening of existing grade separation structures

Discussion in PSR

Hazardous Waste problems, or potential problems, must be discussed in the Project Study Report (PSR), along with a recommended action for avoiding or mitigating the hazardous waste site.

HW Status Meeting

If, after completion of the ISA, a potential hazardous waste problem exists, the Environmental Unit will initiate a meeting with the PM and members of the PDT to discuss alternatives, including avoidance. If avoidance is not prudent or justified by the site assessment information, then a Site Investigation (SI) will be conducted.

Site Investigation

The SI is a limited-scale site investigation intended to confirm the existence of a contamination problem and to get a general idea of the magnitude of the problem. The type, level of effort, and schedule for the SI will be determined at the hazardous waste status meeting. The Environmental Unit, in conjunction with the District HW Unit, is responsible for ensuring completion of the SI work through the use of consultant contractors.

Acquisition of rights of entry, if necessary for the SI investigation, is a time-consuming process and should be initiated as soon as possible. Rights of entry must be obtained through the Right of Way Branch.

At this point in the process, site investigations can vary in detail, depending on the number of sites to be investigated, the project schedule, and the number of project alternatives. After a Preferred Alternative is selected, a more complete site investigation is conducted to fully characterize the site in order to: (1) design the remediation, (2) estimate the cost of the remediation, and (3) reappraise the affected site's property value after factoring in the projected costs of hazardous waste remediation.

Notify Owner and Appropriate Regulatory Agencies

When a SI has identified contamination at an actionable level, the property owner and appropriate regulatory agencies will be notified of the results in accordance with regulatory requirements. The PE (through R/W) requests the appropriate regulatory agency to notify the owner and any other potentially responsible parties of their obligation under the law for mitigation of the contamination. Thorough SI records should be maintained separately for potential use in cost recovery actions.

HW Problems Discussed in Project Report

Following completion of the SI and environmental studies, the Environmental Unit presents the results to the PM and the PDT. If the investigation confirms hazardous waste problems, alternatives to avoid the identified hazardous waste must be identified and evaluated. These problems and the associated alternatives for avoidance or mitigation must be discussed in any Project Report and environmental document. The reports, as appropriate, must include a discussion of any anticipated site cleanup, including a cost and schedule estimate.

Alternative Evaluations

Caltrans' policy is to select the alternative with the least environmental impact and the most cost-effective solution that best meets the project purpose. After the project decision has been made, if the selected alternative contains a known hazardous waste site, the PM has primary responsibility for addressing the hazardous waste problem. Design changes or variations in the selected alternative shall be considered to avoid the site. If avoidance is not prudent, additional studies must be conducted to investigate ways to minimize hazardous waste impacts.

Project Decision HW Meeting

After the project decision, the PM arranges a Project Decision HW Meeting with the PDT and appropriate Caltrans functional units (including Legal) to discuss the extent of the problem and formulate a plan of action. The FHWA should be involved (as appropriate). The Environmental Unit will determine if the appropriate regulatory agency has notified the owner and/or other potentially responsible parties of a required cleanup. If not, such notification will be sought. The Right of Way Branch will contact the owner of the property to determine whether the owner is able to and intends to investigate and remediate the site such that the project schedule can be met.

HW Strategy Meeting

The PM arranges the HW Strategy Meeting with the PDT to evaluate the magnitude of the hazardous waste problem. The meeting should discuss the following possible services:

Case 1 – If the property owner has agreed to accept responsibility for the hazardous waste remediation, and after investigation, decides to accept responsibility for both the execution and expense of the cleanup, then Caltrans will develop a plan of action that incorporates the owner's intent and that specifies a program schedule that Caltrans expects to be followed. It is also possible in Case 1 for the owner to have investigated the hazardous waste cleanup and decided to have Caltrans clean up the problem. If this were to occur, Caltrans would evaluate the owner's investigation and then proceed with cleanup as in Case 2. The cleanup costs, as well as any additional investigative work required for the cleanup, would be deducted from the appraised property value.

Case 2 – If the property owner cannot or will not investigate and remediate the site, Caltrans would continue investigating the hazardous waste problem, and would proceed to hold a meeting to discuss remedies for the problem. At this meeting it will be necessary to determine whether time allows for HW investigation and remediation prior to construction of the transportation facility or whether it will be necessary to clean up during construction. The Legal Division will be requested to seek cost reimbursement from the owner and/or responsible parties.

Cleanup by Owner and/or Responsible Party

When the owner and/or responsible party has accepted cleanup responsibility, it is Caltrans' responsibility to monitor their investigation and cleanup progress and to

make appropriate schedule changes. Caltrans must also prepare a Right of Way report showing estimated cleanup costs incurred by the State.

The report should be sent to the Right of Way Branch for appraisal adjustment. If at any point in the monitoring process Caltrans feels the owner's progress is unsatisfactory, the PM must initiate actions that will decide if the schedule slippage is such that Caltrans should take over the investigation and/or remediation process. Such a decision should involve upper district management. Refer to Figure 3 for responsibilities.

Additional Site Investigation — if Warranted

If the property owner does not investigate or remediate the site, or fails to show satisfactory progress in these activities, then Caltrans may decide to assume such responsibilities.

Prior to the start of the Caltrans site investigation, design changes to avoid the site or minimize HW involvement must be evaluated. If site avoidance is not possible and a Caltrans investigation will be needed, the PM should request the Environmental Unit to undertake the appropriate studies. These studies must be coordinated with the District HW Unit and the Right of Way Branch for necessary rights of entry and required investigation. The site investigation must be comprehensive enough to fully characterize the site, by identifying the types of contamination, the quantities involved, and suggested remediation schemes that are appropriate for the site.

Remedial Investigation / Feasibility Study

Projects with contamination are to be investigated using the Statewide HW Investigation Contract through the Task Order Process. A more extensive Remedial Investigation/Feasibility Study (RI/FS) will be required if: (1) substantial contamination is present, or if (2) the site is a listed State or federal Superfund site.

The Remedial Investigation is a site investigation adequate to characterize the site's size and the types and quantities of contamination that are present. The Feasibility Study is an evaluation of the types of remediation that will clean up the site's contamination. Remediation strategies range from digging up the contamination for disposal at another site to complex vapor extraction systems or bioremediation techniques.

The RI/FS time frame is difficult to predict because the work may be coordinated with regulatory agencies and is subject to changes pursuant to the requirements of the agencies. The Legal Division must be contacted regarding appropriate hazardous waste investigation records to be retained for cost recovery actions.

Appraisal for Certificate of Sufficiency

The result of the site investigation will be used in preparing the parcel Certificate of Sufficiency. The parcel Certificate of Sufficiency from Design to Right of Way is to include a narrative certification from the District Division Chief, Design, that the property can be: (1) considered free of significant hazardous waste; or (2) the Certificate will include a completed and approved property investigation report stating the nature and extent of contamination and appropriate remedial cost

estimate; or (3) if appropriate, the Certificate will also state the owners approved cleanup plans, schedule and current status. Priority acquisition may be required so necessary condemnation proceedings can be initiated to avoid project delay.

Hazardous Waste Management Plan

The RI/FS for potential mitigation measures for the hazardous waste site constitutes the Hazardous Waste Management Plan (HWMP). The Hazardous Waste Management Plan (HWMP) is a decision-making document that describes the management of a contaminated site, including cleanup, schedule, etc. It summarizes the results of the RI/FS. The RI/FS will include a list of remediation options for cleaning up the site. The type and complexity of the HWMP is determined by the PM. Normally, the HWMP is developed at the conclusion of the HW investigation. Involvement of potential responsible parties is advised, so that any cost recovery efforts cannot be challenged on the basis that the parties were excluded from the mitigation decision process.

The HWMP is usually written by the Project Manager/Project Engineer, in coordination with the District HW Unit.

HWMP Decision Meeting

A Hazardous Waste Management Plan (HWMP) Decision Meeting is called by the PM. It includes the PDT, the Construction Unit, and the Legal Division. This team reviews the Caltrans investigation and the management plan and selects a cleanup strategy based upon the proposals and anticipated schedules provided in the RI/FS. Cost recovery decisions and procedures, if applicable, are decided at this time. The Legal Division is responsible for defining what documentation and support information will be necessary for the cost recovery effort.

Community Involvement Plan

It is advisable to provide the public with early notification of significant hazardous waste investigations and subsequent cleanup activities. This often defuses potential adverse public reaction that may otherwise occur when the cleanup work begins. The PM is responsible for coordinating the community relations effort and is encouraged to work with the district's Public Information Unit on related community involvement issues and activities.

Remedial Action Plan

Once a cleanup strategy has been selected, a Remedial Action Plan (RAP) needs to be developed to implement the remediation. The RAP specifies the details required to carry out the selected remediation strategy. After the investigation, the RAP will be prepared by a consultant or the district, depending on the type of remediation selected. Development of the RAP is the responsibility of the PM, with assistance from the District HW Unit.

Regulatory Agency Involvement

Depending on the type and extent of contamination, the RAP may require approval by appropriate regulatory agencies, as well as necessary public notification. On-site

treatments will need permits from various regulatory agencies, which could require several months to secure.

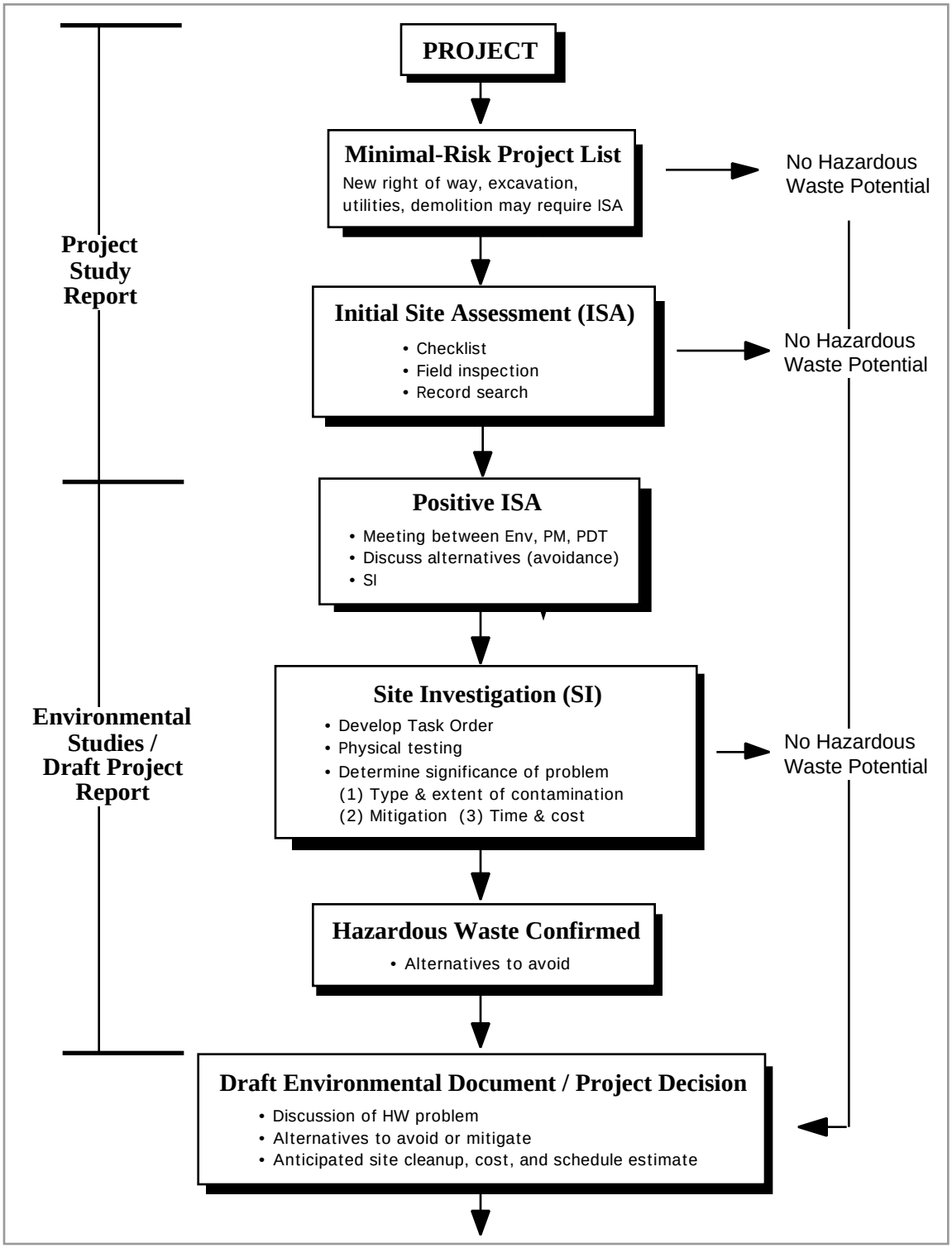
HW PS&E

The mitigation (cleanup) will require a contract and a PS&E based on the RAP. The Design Unit is responsible for the PS&E for the hazardous waste cleanup. The Construction Unit is responsible for administration of the cleanup contract. In exceptional cases, cleanup of the hazardous waste may be accomplished as part of the construction contract. In these cases, approval of the Chief Engineer, delegated to the DLPP Program Manager, is required. The district PM shall develop appropriate detailed special provisions for inclusion in the PS&E. The district is encouraged to consult with Headquarters (HWM Branch) for development and review of hazardous-waste-related special provisions.

Recovery Actions

Whether the contamination is encountered prior to construction or during the construction phase, the Legal Division will be responsible for pursuing appropriate cost recovery from potentially responsible parties. Support will be provided from all Caltrans functional units that have information for such recovery action.

FIGURE 2 - Caltrans Hazardous Waste Process Overview



(continued)

FIGURE 2 - Caltrans Hazardous Waste Process Overview
(continued)

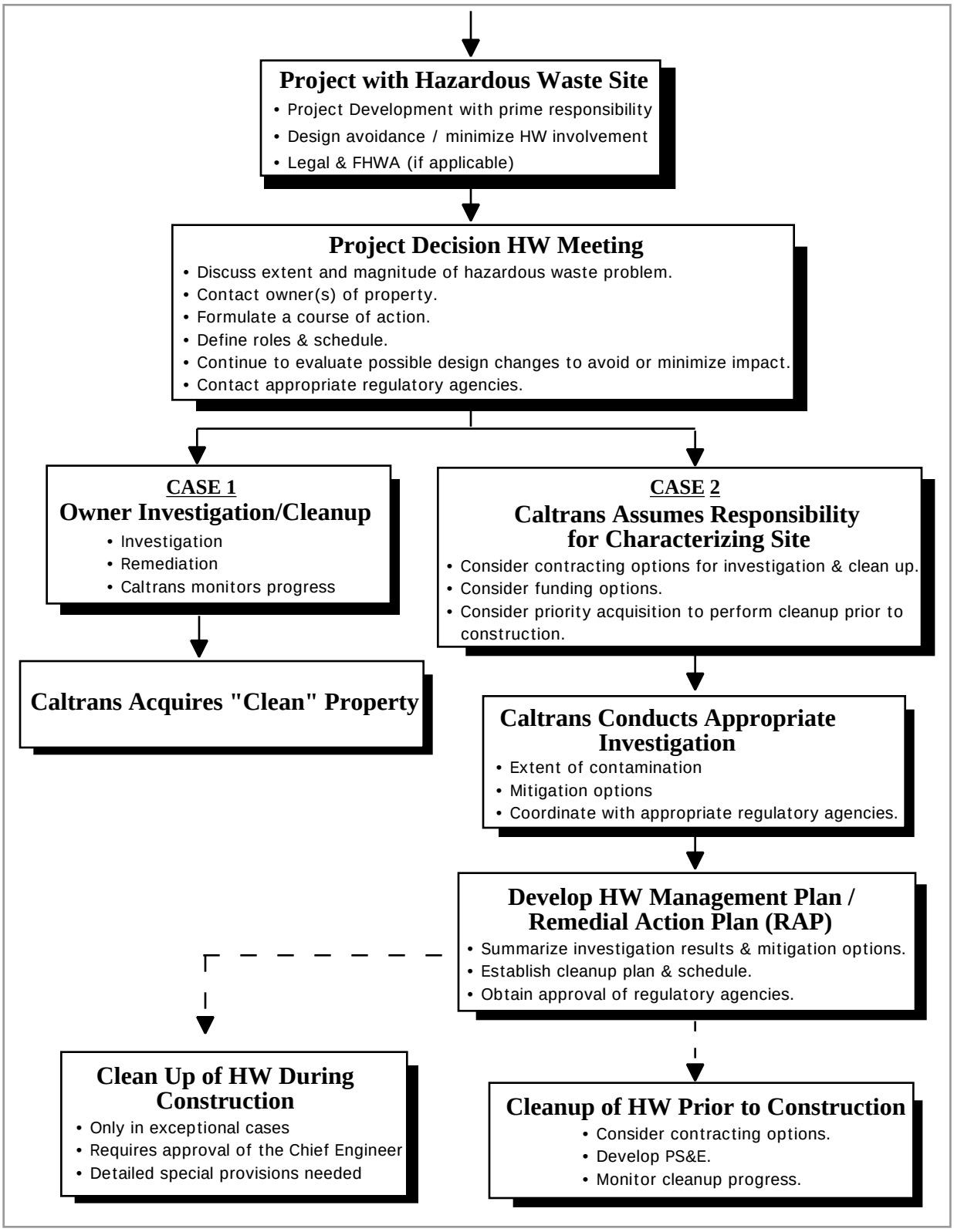


FIGURE 3 - Hazardous Waste Process Milestones

Milestone	Activity	Functional Unit				
		PD/PM	R/W	ENV	CON	LEG
0 to 10	Initiate Environmental Process (HW)	L				
	• Hazardous Waste (HW) Screening, when maps available			L		
	Conduct Initial Site Assessment (ISA)					
	• Follow ISA Checklist		L	L		
	- Records Review: information from sources such as Superfund account, regul. agencies, historical & current land uses, etc. Identify potential HW sites. Visually inspect site. ISA report.			L		
	• Prepare ISA Task Order, if applicable			L		
	• Obtain Right of Entry, if necessary		L			
◊ 20	HW Status Meeting	L		S*		
	• Determine direction of SI & project	L				
20 to 40	Conduct Site Investigation (SI)			L		
	If potential HW site(s) identified:					
	• Prepare Task Orders to perform SIs (characterize wastes and estimate of site score)			L		
	• Contact owner; if actionable findings, notify regulatory agency		L			
	• Present SI findings, evaluate avoidance alternatives.	S	S	L		
	• Based on SI findings, incorporate information into DPR; include mitigation measures and estimated costs.	L		L		
60 to 100	DPR: Draft environmental document and Preferred Alternative Has HW Related Problem	L		L		
◊ 200	Project Decision HW Meeting	L*	L	L		L
	• Determine significance/magnitude of HW problem	S	S	L		S
	• Evaluate options	L	S	S		S
	• Select plan of action	L	S	S		S
200 to 220	Owner Cleanup / CT Remedial Investigation / Feasibility Study	L	S	S		S
	• CASE 1- owner/PRP Investigation/Cleanup					
	- Determine owner/ PRP of property		L			
	- Contact owner/PRP of property		L			
	- Caltrans monitors progress of the owner's cleanup effort/initiated by owner/PRP	L		S		
	• CASE 2- Initiate Caltrans Remedial Investigation (RI) / cleanup					
	- Investigate Task Order for RI/Feasibility Study (FS)	S		L		
	- Right of Entry for investigation		L			
220	HW Strategy Meeting	L*				
	• CASE 1					
	- Evaluate status of owner cleanup	L		S		
	- Cleanup completed: Proceed with normal process	L				
	- Cleanup unsatisfactory: Go to Case 2	L		S		

PD/PM = Proj Devl Unit / Proj Mgr **R/W** - Right of Way Branch **ENV** = Environmental Unit **CON** = Construction **LEG** = Legal
◊ = Key Meetings **L** = Lead Responsibility **PRP** = Potentially Responsible Party **S** = Support Role * = Initiate Meeting

FIGURE 3 - Hazardous Waste Process Milestones (continued)

Milestone	Activity	Functional Unit				
		PD/PM	R/W	ENV	CON	LEG
220	HW Strategy Meeting (continued)					
	• CASE 2					
	- Initiate RI / FS	S		L		
220 to 260	HWMP, If Needed	L*		S		
	• Review design considerations	L		S		
	• Develop and evaluate mitigation alternatives	L		S		
	• Prepare HWMP (by consultant)	L		S		
	• Commence R/W activities (Milestones 225-265)		L			
◊ 260	HWMP Decision Meeting	L*	S	S	S	S
	• Evaluate Options	L	S	S	S	S
	• Select Mitigation	L	S	S	S	S
	- Mitigation contract prior to Construction	L		S		
	- Mitigation during Construction (by exception)	L		S		
	• Make Cost recovery decision, if applicable		S			L
260-380	Mitigation Implementation - Caltrans	L*	S	S	S	S
	• Determine Remedial Action Plan (RAP)		S	S	S	S
	• Seek Regulatory agency approval/public hearing, if needed	L		S		
	• Conduct Mitigation (cleanup)				L	
	- Complete Contract prior to construction					
	• PS&E for HW cleanup	L				
	• Advertise contract				L	
	• Award contract				L	
	• Administer contract				L	
	• Cleanup approval			S	L	
	• Complete cleanup contract				L	
	• During construction contract (by exception)				L	
	• Special Provisions for HW mitigation	L			S	
	• Seek Cost recovery from responsible parties, if applicable	S	S	S	S	L
380-600	Construction Phase					
	• Check and update current permit status (Milestones 380-480)	S			L	
	• Mitigate during construction (Milestones 500-600)				L	
	- HW specialty item	S			L	
	- Mitigation oversight			S	L	
	- Cleanup approval	L				
	• Seek cost recovery from responsible parties, if applicable				S	L

PD/PM = Proj Devl Unit / Proj Mgr **R/W** - Right of Way Branch **ENV** = Environmental Unit **CON** = Construction **LEG** = Legal
◊ = Key Meetings **L** = Lead Responsibility **PRP** = Potentially Responsible Party **S** = Support Role * = Initiate Meeting